

Ecological Impact Assessment

**Ashwell Street,
Ashwell, Hertfordshire
NGR: TL 27143 39706**

October 2024



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Plans

Plan 1: Site Location

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1.0 Summary of Key Findings

1.1 Introduction

1.1.1 Blackstone Ecology Ltd. was commissioned to conduct an ecological appraisal of a parcel of land at Ashwell Street, Ashwell, Hertfordshire. The area surveyed is referred to as 'the site' for the purposes of this report.

1.2 General Site Description

1.2.1 The site is located within the village of Ashwell and adjoins residential development to three sides. It comprises a single parcel of rank, species-poor grassland, together with a small area of scrub, scattered trees, boundary hedgerows and a tree line.

1.3 Designations, Priority Habitats and Priority and Protected Species

1.3.1 The site itself is not subject to any statutory or non-statutory ecological designations. The nearest statutory designation is Ashwell Springs SSSI, situated approximately 50m to the northwest of the site at its closest point. The closest non-statutory designation is Ducklake Farm LWS, 240m northwest.

1.4 The site supports only hedgerow priority habitat and has limited potential to support protected species, namely nesting birds and foraging bats. There is minor potential for reptiles, common amphibian species and Hedgehog to occur within the site.

1.5 Recommendations

1.5.1 Appropriate protection measures are required for retained trees and hedgerows. Precautionary mitigation measures are also identified (see Section 7) to avoid adverse effects on nesting birds, bats, Hedgehog, reptiles and amphibians. Proportionate biodiversity enhancement measures are identified, including integrated bat roost features and bird nesting boxes for the built development. A sensitive lighting scheme will also be required to avoid adverse impacts on bats. Proposals for achieving a significant gain in on-site biodiversity are presented separately.

2.0 Introduction

2.1 Background and Proposals

2.1.1 Blackstone Ecology has been commissioned to undertake an ecological impact assessment in respect of development of a parcel of land at Ashwell Street, Ashwell, Hertfordshire, centred at grid reference TL 27143 39706. The proposals are for residential development with associated infrastructure and public open space. The site has been subject to an earlier planning application and the site was previously surveyed by Blackstone Ecology in July 2022, this survey being repeated in May 2024 to inform the current application.

2.2 Site Overview

2.2.1 The site is located within the village of Ashwell and adjoins residential development to three sides. It largely comprises a single parcel of rank, species-poor grassland, together with a small area of scrub, boundary hedgerows (the eastern boundary hedgerow being outside the red line boundary) and a tree line. The site adjoins residential development to three sides, with Ashwell Street to the southeast, beyond which is arable farmland. It is located within an area of shallow lime-rich soils over chalk and slopes down to the north.

2.2.2 It is understood that the site was sheep grazed as recently as 2019, but at the time of the 2022 survey it appeared unmanaged, with a tall, rather rank sward, and that remains the current (2024) situation. The narrow section of the site connecting the main grassland area to Lucas Lane appeared in 2022 to have been adopted as a garden area by a neighbouring property but the former mown lawn is currently unmanaged. This area also contains three trees and an area of predominantly non-native scrub. The southeastern boundary of the grassland is fenced, beyond which is a line of trees bordering Ashwell Street.

2.3 Purpose of the Report

2.3.1 This report documents the methods and findings of the baseline ecological survey and desktop study carried out in order to establish the existing ecological interest of the site. It provides an assessment of the existing value of the site and the likely impacts the proposed scheme might have upon notable and/or protected species and habitats. It sets out recommendations to avoid, mitigate or compensate for such impacts and, where appropriate, identifies opportunities for ecological enhancement, identified with reference to national conservation priorities and local Biodiversity Action Plans (BAPs).

3.0 Legislation and Policy

3.1 Legislation

3.1.1 The key pieces of legislation relating to nature conservation in the UK are:

- Wildlife and Countryside Act 1981 (as amended)
- Protection of Badgers Act 1992
- The Hedgerows Regulations 1997
- Countryside and Rights of Way (CROW) Act 2000 (for England and Wales)
- Natural Environment and Rural Communities (NERC) Act 2006
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- Environment Act 2021.

3.1.2 A summary of the relevant legislation is provided below. The original Acts and instruments should be referred to for the full and most up to date text of the legislation.

3.1.3 The **Wildlife and Countryside (WCA) Act 1981** as amended provides for the notification and confirmation of Sites of Special Scientific Interest (SSSIs) and contains measures for the protection and management of SSSIs.

3.1.4 The Act also refers to UK wildlife species, providing protection listed under Schedules 1 (birds), 5 (mammals, reptiles, amphibians, fish and invertebrates) and 8 (plants).

3.1.5 Under Section 1(1) of the Act, all wild birds are protected, making it an offence to intentionally:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird whilst in use or being built;
- Take or destroy an egg of any wild bird.

3.1.6 Offences in respect of Schedule 1 birds are subject to higher penalties, while these species also receive additional protection, such that it is an offence to intentionally or recklessly:

- Disturb any wild bird included in Schedule 1 while it is building a nest or while it is in, on or near a nest containing eggs or young;
- Disturb dependent young of such a bird.

3.1.7 Under Section 9(1) of the Act, it is an offence, *inter alia*, to:

- Intentionally kill, injure or take any wild animal included in Schedule 5¹.

3.1.8 In addition, under Section 9(4) it is an offence to intentionally or recklessly:

- Obstruct access to any structure or place which any wild animal included in Schedule 5 uses for shelter or protection; or
- Disturb any wild animal included in Schedule 5 while occupying a structure or place which it uses for that purpose.

3.1.9 Under Section 13(1) it is an offence:

- To intentionally pick, uproot or destroy any wild plant listed in Schedule 6; or
- Unless the authorised person, to intentionally uproot any wild plant not included in Schedule 8.

3.1.10 The Act also contains measures (S14) for preventing the establishment of non-native species that may be detrimental to native wildlife, prohibiting the introduction into the wild of animals (releasing or allowing to escape) and plants (planting or causing to grow) listed under Schedule 9.

3.1.11 The **Protection of Badgers Act** 1992 aims to protect the species from persecution, rather than

¹ Certain species are protected only in relation to trade or sale.

being a response to an unfavourable conservation status. It should be noted that the legislation is not intended to prevent properly authorised development. Under the Act, it is an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat² a Badger, or attempt to do so; or
- To intentionally or recklessly interfere with a sett (including disturbing a Badger whilst it is occupying a sett, as well as damaging, destroying or obstructing access to it).

3.1.12 Licences may be obtained from the Statutory Nature Conservation Organisation (for England this is Natural England) for development activities that would otherwise result in an offence.

3.1.13 **The Hedgerows Regulations 1997** protects 'important' hedgerows (as defined by the Regulations) from removal (up-rooting or otherwise destroying). A range of criteria to identify 'important' hedgerows are set out within the Regulations.

3.1.14 The **Countryside and Rights of Way (CROW) Act 2000** applies to England and Wales and provides further measures for the management and protection of SSSIs and strengthens wildlife enforcement legislation. Schedule 12 of the Act amends the species provisions of the WCA 1981, strengthening the legal protection for threatened species. The Act also introduced a duty for Government to have regard to the conservation of biodiversity and to maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity.

3.1.15 The **Natural Environment and Rural Communities (NERC) Act 2006** requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of Biodiversity in England. This 'S41' list is used to guide decision makers, including local planning authorities, in implementing their duty under Section 40 of the Act, to have regard to the conservation of biodiversity in England when exercising their normal functions. Currently, 56 habitats and 943 species of principal importance are included on the S41 list, and very largely reflect those identified as priorities in the UK Biodiversity Action Plan (BAP).

3.1.16 **The Conservation of Habitats and Species Regulations 2017**, or the 'Habitats Regulations 2017', as amended, transposed European Directives (Habitats Directive 92/43/EEC) and the Birds Directive' (79/409/EEC, now amended to Directive 2009/147/EC) into English and Welsh legislation. This has been amended by **The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019** which effectively continues the same provision for European Protected Species after Brexit.

3.1.17 The Regulations seek to contribute to the maintenance of biodiversity through the conservation of sites, known as Special Areas of Conservation (SACs) for those containing habitats and species of European importance (as listed in Annexes I and II of the Habitats Directive) and as Special Protection Areas (SPAs) for important bird sites as identified in accordance with the Birds Directive. As a matter of government policy, the Regulations are also considered to apply to Ramsar sites.

3.1.18 The Regulations also provide protection to European Protected Species (EPS). This protection largely overlaps with the WCA 1981, albeit the provisions are generally stricter. Under Regulation 41 it is an offence, *inter alia*, to:

- Deliberately capture, injure or kill any wild animal of an EPS;
- Deliberately disturb any wild animals of any such species, including in particular any disturbance likely to impair their ability to survive, to reproduce, to hibernate, or to migrate, or which is likely to affect their local distribution or abundance;
- Deliberately take or destroy eggs of any such animal;

² The intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence.

- Damage or destroy a breeding site or resting place of such an animal.

3.1.19 The Regulations provide a licensing system that permits otherwise illegal activities in relation to EPS, subject to certain tests being satisfied.

3.1.20 The **Environment Act 2021** includes amendments to the NERC Act 2006 (duty to conserve biodiversity), with emphasis on enhancing biodiversity rather than simply conserving it.

3.1.21 Schedule 14 of the Environment Act 2021 sets out an amendment to Schedule 7A, Part 1 of the Town and Country Planning Act 1990, as amended:

"1(1) This Schedule makes provision for grants of planning permission in England and Wales to be subject to a condition to secure that the biodiversity gain objective is met.

2(1) The biodiversity gain objective is met in relation to development for which planning permission is granted if the biodiversity value attributable to the development exceeds the pre-development biodiversity value of the on-site habitat by at least the relevant percentage.

(2) The biodiversity value attributable to the development is the total of:

(a) the post-development biodiversity value of the on-site habitat,

(b) the biodiversity value, in relation to the development, of any registered off-site biodiversity gain allocated to the development, and

(c) the biodiversity value of any biodiversity credits purchased for the development.

(3) The relevant percentage is 10%."

3.1.22 The 10% requirement for biodiversity net gain set out above has been brought into force for most development through secondary legislation. As set out in The Biodiversity Gain Requirements (Exemptions) Regulations 2024, the net gain requirement does not apply to householder and self-build and custom build applications. The requirement is not applied retrospectively to planning applications made prior to its introduction.

3.2 Planning Policy

3.2.1 The National Planning Policy Framework (NPPF, December 2023) relating to biodiversity is both guidance for local governing authorities on the content of their Local Plans and material consideration in determining planning applications. The NPPF has replaced most earlier planning policy guidance, including Planning Policy Statement 9: Biological and Geological Conservation. However, the government circular 06/05: *'Biodiversity and Geological Conservation- Statutory Obligations and their impact within the Planning System'*, which accompanied PPS9, remains valid.

3.2.2 Paragraph 186 of the NPPF states: *When determining planning applications, local authorities should apply the following principles:*

- a) *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that makes it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient and veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- d) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.*

3.2.3 Relevant local planning policy is provided by the North Hertfordshire Local Plan 2011-2031. Policy SP12: Green Infrastructure, landscape and biodiversity states:

We will accommodate significant growth during the plan period whilst ensuring the natural environment is protected and enhanced. We will:

- a) *Protect, identify, manage and where possible enhance a strategic multi-functional network of green infrastructure;*
- b) *Consider and respect landscape character, scenic beauty and locally sensitive features, particularly in relation to the Chilterns Area of Outstanding Natural Beauty;*
- c) *Protect, enhance and manage designated sites in accordance with the following hierarchy of designations and features:*
 - *Internationally designated sites*
 - *Nationally designated sites*
 - *Locally designated sites*
 - *Non-designated sites that include important habitats and species*
- d) *Protect, enhance and manage biodiversity networks including wildlife corridors, ancient woodlands and hedgerows, wetland and riverine habitats, and non-designated sites of ecological value and ensure measurable net gains for biodiversity; and*
- e) *Protect other open spaces and support provision of new and improved open space.*

4.0 Methodology

4.1 Desktop Study

4.1.1 Records provided by Herts Environmental Records Centre (HERC) and Cambridgeshire and Peterborough Environmental Records Centre (CPERC) of protected/notable species and non-statutory designated sites, obtained in 2022, were reviewed for those dating from 2000 to present and within 2km of the centre of the site. A search of the Multi-Agency Geographic Information for the Countryside (MAGIC) website was undertaken with regards to the presence of statutory nature conservation sites and records of priority habitats and notable species. In addition, information relating to SSSI Impact Risk Zones (IRZ) provided on MAGIC was reviewed. The Woodland Trust's Ancient Tree inventory was checked for the presence of veteran trees in the vicinity of the site.

4.1.2 A search for waterbodies within 250m of the site was also undertaken, using a range of mapping resources, including online aerial photography, MAGIC and OS Maps.

4.2 Habitat Survey

4.2.1 The site was surveyed in July 2022 in order to determine the general ecological value of the site and to identify the main habitats and ecological features present. An update survey was undertaken in May 2024.

4.2.2 The site was surveyed in 2022 based on standard Phase 1 habitat survey methodology³, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This provides an inventory of the basic habitats present and allows identification of areas of higher potential ecological value which require further survey. Any such areas can then be examined in more detail through Phase 2 surveys. This methodology was extended, in accordance with CIEEM guidance⁴, to record details of the actual or potential presence of any notable or protected species. In addition to use of the Phase 1 habitat classification, habitats were also classified in line with the UK Habitats Classification for the purposes of calculation of Biodiversity Net Gain (BNG) using Natural England's Biodiversity Metric 3.1. For the main area of grassland, the species diversity was estimated by assessment of a series of sampling points along a W-transect.

4.2.3 The site was re-surveyed in May 2024, with habitats classified in accordance with the UK Habitats Classification V2.0 (UK Habs). Habitat condition was assessed following The Statutory Biodiversity Metric Technical Annex 1: Condition Assessment Sheets and Methodology.

4.3 Faunal Surveys.

4.3.1 General faunal activity, such as mammals or birds observed visually or by call during the course of the surveys was recorded. Specific attention was also paid to the potential presence of any protected, rare or notable species, including Badger *Meles meles* and bats.

4.3.2 The Badger survey consisted of a search for Badger setts within or close to⁵ the site and a search for signs of Badger presence within the site. Such signs include prints, latrines, pathways and characteristic feeding signs.

A preliminary ground level assessment of trees for potential roost features (PRFs) for bats was also carried out. The aim of the survey was to determine the potential presence of bats in trees within the site. Each tree was categorised using the following scoring system in the Bat Conservation Trust's Good Practice Guidelines (2023):

³ *Handbook for Phase 1 habitat survey: A technique for environmental audit*. JNCC 2010

⁴ *Guidelines for Preliminary Ecological Appraisal* Chartered Institute for Ecology and Environmental Management (CIEEM) 2013

⁵ i.e. within 30m

- **None** – Either no PRFs in the tree or highly unlikely to be any.
- **FAR** – Further assessment required to establish if PRFs are present in the tree.
- **PRF** – A tree with at least one PRF present.
- **High** – A tree with one or more potential roost sites that are obviously suitable for use by larger number of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

4.3.3 Equipment available for the bat survey included various sized torches, extending mirror and close-focusing binoculars.

4.3.4 The survey was undertaken by Ian Johnson, a level one class licensed bat surveyor [Licence No. 2015-14657-CLS-CLS].

4.4 Survey Constraints and Limitations

4.4.1 All the species that occur within a habitat may not necessarily be detectable within every season. The surveys were both undertaken within the optimum season for botanical assessment, and the vegetation was uncut and ungrazed at the time of both surveys. The surveyor is an experienced and competent botanist and the habitat surveys were considered to be unconstrained.

4.4.2 Waterbodies were identified using multiple mapping sources during the desktop survey. Some waterbodies are not illustrated on maps and may not be apparent on aerial photographs. Therefore, some waterbodies may have gone undetected.

5.0 Results

5.1 Background Data

Statutory and Non-Statutory Nature Conservation Sites

5.1.1 There are a number of statutory and non-statutory nature conservation sites within 2km of the site. These are listed in Table 1.

Table 1: Statutory and Non-statutory Nature Conservation Sites

Site	Designation	Distance/ Direction	Reason for Designation
Ashwell Springs	SSSI	50m northwest	A series of freshwater springs flowing into small pools with a chalk and flint substratum and supporting a specialized cold water invertebrate community. Surrounding trees are important in providing some shade for the pools.
Ducklake Farm, Ashwell	LWS	240m northwest	Building and environs important for protected species. Wildlife Site criteria: Species
Partridge Hall Farm	LWS	925m southwest	Field supporting long-standing secondary grassland with old hedges around the margin. Most of the site is open scrub with neutral/calcareous grassland supporting species such as Lady's Bedstraw (<i>Galium verum</i>), Cowslip (<i>Primula vulgaris</i>), Common Knapweed (<i>Centaurea nigra</i>), Greater Knapweed (<i>Centaurea scabiosa</i>), Common Birds-foot-trefoil (<i>Lotus corniculatus</i>), Ox-eye Daisy (<i>Leucanthemum vulgare</i>), Meadow Vetchling <i>Lathyrus pratensis</i>), Ploughman's-spikenard (<i>Inula conyzae</i>) and Crosswort (<i>Cruciata laevipes</i>). The latter two plant species are both considered to be scarce plant species in Hertfordshire. There is also a diverse fauna which includes breeding Willow Warbler (<i>Phylloscopus trochilus</i>) and four species of butterfly. Wildlife Site criteria: Grassland indicators.
Ruddery Pit	CWS	1,220m east	Supports frequent numbers of six or more strong calcareous grassland indicator species
Ashwell Quarry	LWS, RIGS	1,720m west	Very old, disused chalk pit with re-established chalk grassland and areas of scrub and exposed chalk faces supporting a diverse flora. Good for invertebrates. Site with protected species. Wildlife Site criteria: Species.

Site	Designation	Distance/ Direction	Reason for Designation
Ashwell Quarry Springs	LWS	1,770m west	Chalk springs and overgrown banks. Springs are a minor source of the River Cam and support uncommon species of flatworms. Wildlife Site criteria: Species.
Ashwell Quarry and Springs	WT reserve	1,720m west	Disused quarry with a chalk grassland flora and a stream with a rare flatworm species.

Note: CWS – County Wildlife Site; LWS - Local Wildlife Site; RIGS – Regionally Important Geological/Geomorphological Site; SSSI - Site of Special Scientific Interest; WT Reserve – Herts and Middlesex Wildlife Trust Reserve. Distances are measured to the closest point.

Priority Habitats and Veteran Trees

5.1.2 No priority habitats were identified in close proximity to the site. A chalk river is present 240m west of the site and MAGIC also identifies an area of lowland calcareous grassland approximately 1.2km east of the site.

5.1.3 The Woodland Trust's Ancient Tree inventory identified no ancient, veteran or notable trees in the proximity of the site.

Notable and / or Protected Species

5.1.4 Within the records consulted, since the year 2000 a wide range of farmland bird species have been recorded within the 2km search radius, those considered relevant to the site being Bullfinch *Pyrrhula pyrrhula*, Barn Owl *Tyto alba* and Linnet *Linaria cannabina*. Other relevant bird species recorded include Kestrel *Falco tinnunculus*, Song Thrush *Turdus philomelos*, Mistle Thrush *Turdus viscivorus*, Dunnock *Prunella modularis*, House Sparrow *Passer domesticus*, Greenfinch *Chloris chloris*, Starling *Sturnus vulgaris*, Green Woodpecker *Picus viridis* and Swift *Apus apus*.

5.1.5 Records of a variety of bat species were also returned, including Brown Long-eared Bat *Plecotus auritus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Common Pipistrelle *Pipistrellus pipistrellus*, Noctule *Nyctalus noctula*, Leisler's Bat *Nyctalus leisleri*, Serotine *Eptesicus serotinus*, Daubenton's Bat *Myotis daubentonii*, Natterer's Bat *Myotis nattereri* and Barbastelle *Barbastella barbastellus*. Other mammal records include Brown hare *Lepus europaeus* and Hedgehog *Erinaceus europaeus*.

5.1.6 The data search returned numerous records of chalk grassland flora, largely within nearby non-statutory designations, and none are considered relevant to the site.

5.1.7 Numerous records of invertebrates were also returned, many of these relating to moth species which remain relatively widespread and which were listed under the UK BAP as research species. As such, their presence or potential presence on an individual site is not significant. Butterfly records included Small Heath *Coenonympha pamphilus*.

5.1.8 Records of reptiles and amphibians were few, but did include records of Grass Snake *Natrix helvetica*, Great Crested Newt *Triturus cristatus* and a single record of Common Lizard *Zootoca vivipara*, although this last record may have been more than 2km from site.

5.2 Field Survey

Habitats and Ecological Features

5.2.1 Within the site, the following habitats and features were recorded (UK Hab classification in brackets):

- Species-poor semi-improved Grassland (Modified grassland, g4)
- Scrub (Scattered scrub, secondary codes 10, 847)

- Hedgerows (Native hedgerow, h2a)
- Tree line (Line of trees, Secondary code 33)
- Scattered Trees (Scattered trees, secondary code 32)

Species-poor Semi-improved Grassland

5.2.2 The 2022 survey found the great majority of the site to comprise species-poor grassland dominated by False-oat Grass *Arrhenatherum elatius*. Other grass species recorded include Perennial Rye-grass *Lolium perenne*, Common Bent *Agrostis capillaris*, Cock's-foot *Dactylis glomerata*, Red Fescue *Festuca rubra*, Soft Brome *Bromus hordeaceus* and Barren brome *Anisantha sterilis*. The sward is highly grass-dominated but a range of forbs were recorded, with Ragwort *Senecio jacobaea* and Spear Thistle *Cirsium vulgare* occasional within the sward. Other species present at very low frequencies within the sward include Mouse-ear *Cerastium fontanum*, Curled Dock *Rumex crispus*, Carrot *Daucus carota*, Germander Speedwell *Veronica chamaedrys*, Agrimony *Agrimonia eupatoria*, Teasel *Dipsacus fullonum*, Dandelion *Taraxacum* agg., Black Knapweed *Centaurea nigra*, Smooth Hawk's-beard, Prickly Sow-thistle *Sonchus asper*, Bristly Oxtongue *Helminthotheca echioides*, Hawkweed Oxtongue *Picris hieracioides* and Great Mullein *Verbascum thapsus*. The average species diversity within the sward was estimated to be just under 5 species m⁻². Accordingly, the grassland is considered to be Modified Grassland under the UK Habitats Classification.

5.2.3 The update survey in 2024 found the grassland remained very species-poor and it continues to be highly grass dominated. Forb species include locally frequent Carrot, Creeping Thistle, and Cut-leaved Crane's-bill *Geranium dissectum*. Low numbers of Cowslip *Primula veris* were recorded close to both the northern and the southern boundaries but were recorded nowhere else within the grassland. Single plants of Black Knapweed, Teasel and Agrimony were recorded, together with occasional Docks. The grass composition of the sward is largely unchanged, although frequencies of annual grasses and Perennial Rye-grass may have reduced. The sward continues to be dominated by False Oat-grass, with Cock's-foot locally abundant. Species-diversity remains low, estimated at between 4 and 5 species m⁻².

5.2.4 The narrow, northern extension of the site included an area of regularly close-mown grassland in 2022. However this is currently unmanaged, with a relatively tall sward at the time of survey. Species previously recorded include Red Fescue, Rough Meadow-grass *Poa trivialis*, Cock's-foot, Selfheal *Prunella vulgaris*, Smooth Hawk's-beard *Crepis capillaris*, Lesser Trefoil *Trifolium dubium* Stinking Iris *Iris foetidissima*, Spear Thistle and Creeping Thistle *Cirsium arvense*. The area may now be more grass-dominated, with False Oat-grass now present. Species diversity remains close to 5 species m⁻².

Scrub

5.2.5 The northernmost part of the site, adjoining Lucas Lane, comprises a small area of mixed scrub. A number of native species were recorded, namely Holly *Ilex aquifolium*, Ivy *Hedera helix* and Elder *Sambucus nigra*. However, the habitat largely comprises non-native species including Cherry Laurel *Prunus laurocerasus*, Butterfly Bush *Buddleja davidii* and Forsythia *Forsythia* sp.. Under the UK Habitats classification this is considered to be best classed as introduced shrub. In addition as single Yew *Taxus baccata* bush, possibly a garden cultivar, is present on the boundary between the main site and the northern extension. The scrub habitat remains unchanged from that recorded in 2022.

Hedgerows

5.2.6 Hedgerows mark the southwestern and northeastern boundaries of the main area of grassland. However, the northeastern hedgerow lies beyond the red line boundary. A further offsite hedgerow

marks the northeastern boundary of the strip of land extending to Lucas Lane. All other boundaries are fenced.

5.2.7 Hedgerow H1 marks the boundary of a number of domestic curtilages to the west of the site and is of varying composition. To the south it is dominated by Blackthorn *Prunus spinosa* with Hazel *Corylus avellana*, Elm *Ulmus* sp. and Sycamore *Acer pseudoplatanoides* also present. Associated species recorded include Ivy and a ground flora dominated by Nettle *Urtica dioica* and Cleavers *Galium aparine*. This section, on rising ground relative to the site, was between 2.5m and 3.0m in height. North of this section, the hedgerow appears unmanaged, being over 5m high and comprising a mix of Elder, Elm, Ivy, Crab Apple *Malus sylvestris* and Sycamore. Associated herbaceous species include Nettle and White Bryony *Bryonia dioica*. The northernmost section of H1 is managed to a height of approximately 3m relative to the site and consists of a mixture of Crab Apple, Sycamore, Elder, Ivy and Elm. Associated species include Nettle and occasional Black Horehound *Ballota nigra*.

5.2.8 The offsite hedgerow H2, which will not be impacted by the proposed development, is also variable in nature. The southern section comprises managed Leyland Cypress *Cupressus x leylandii*, while to the north of this the hedgerow consists of a mixture of native and non-native species, including Field Maple *Acer campestre*, Cherry Laurel, Elder, Hazel, Hawthorn *Crataegus monogyna*, Dogwood *Cornus sanguinea*, Privet *Ligustrum* sp., Wayfaring Tree *Viburnum lantana* and Ivy. Associated species include White Bryony and Black Horehound. Hedgerow H2 is relatively tall, typically being 4m or more in height.

Tree Line

5.2.9 The southeastern boundary of the site is marked by a line of trees largely comprising Sycamore with occasional Ash *Fraxinus excelsior*. The trees are young to semi-mature, with a continuous canopy along the length of the southern boundary. There is a discontinuous understorey of Privet, Elder, Dog-rose *Rosa canina* and Hawthorn growing over Ivy and Cleavers *Galium aparine*.

Scattered Trees

5.2.10 Two Ash trees are present within the northern extension of the site, both being semi-mature/early-mature and supporting some Ivy growth. In the same area are a young Sycamore and six small Lawson Cypress *Chamaecyparis lawsoniana* adjacent to an offsite garage in the northern part of the site.

Adjacent Habitats

5.2.11 Adjacent habitats comprise domestic gardens, other than to the north (Lucas Lane) and to the south (Ashwell Street, an unmade roadway). Beyond the village of Ashwell, the wider area is largely agricultural, predominantly arable in nature.

Notable and/or Protected Species

Bats

5.2.12 The trees on site were assessed from ground level for their potential to support roosting bats. None of the trees were identified as supporting potential roost features (PRFs). Due to the height of the trees and the presence of some Ivy growth the presence of PRFs could not be ruled out in the two Ash trees in the north of the site, which are considered to have low potential (FAR) to support roosting bats, with further assessment required in the event that the trees were to be removed. Trees in the southeastern tree line were, with the exception of an Ash, considered too young to have developed PRFs, and Ivy growth, while abundant on some of these trees, was also relatively thin-stemmed and spreading away from the trunk, such that it did not offer significant potential for bats.

5.2.13 Bats are anticipated to use the hedgerows and treeline for commuting and foraging, while the interior of the site also offers some foraging potential.

Birds

5.2.14 Few birds were seen or heard during the course of the surveys, these being limited to Wood Pigeon *Columba palumbus* and Carrion Crow *Corvus corone* flying over the site in 2022, with Wood Pigeon again recorded in 2024 together with Magpie *Pica pica*. The trees and hedgerows onsite have potential to support nesting birds during the breeding season. The tall, dense grassland is not considered suitable to support ground-nesting bird species.

Reptiles

5.2.15 A number of records of Grass Snake *Natrix helvetica* were returned from within 2km of the site and a single record of Common Lizard *Zootoca vivipara* over 1km from the site. The site now supports potential habitat for Common Lizard in the form of a rough, tall sward grassland. However, given the scarcity of background records and the former unsuitability of the site (as sheep-grazed grassland) as recently as 2019, it is considered that Common Lizard is likely absent from the site. There is minor potential for Grass snake to make some use of the site, since this species will wander more widely than other UK reptile species.

Great Crested Newt and Other Amphibians

5.2.16 Two records of the EPS Great Crested Newt were returned from the desktop study. These could have been as close as within 90m of the site, but due to the grid accuracy of the records (given as a 1km square) the records could equally have been from a location over 1km from the site. No waterbodies suitable for Great Crested newt were recorded within 250m of the site. Therefore, while the site does offer potential terrestrial habitat for Great Crested Newt, due to the absence of nearby ponds this species is considered likely absent from the site.

5.2.17 Two records of Common Toad *Bufo bufo* were returned from the desktop study, one of which was approximately 100m from site. It is considered there is potential for common and widespread amphibian species such as Common Toad to utilise habitats within the site, particularly the hedgerows. However, due to the absence of nearby ponds, it is not anticipated that this use will involve large numbers of animals.

Badger

5.2.18 No records of Badger were returned by HERC or CPERC. No evidence of Badger presence was recorded within the site, although there is potential for the species to occur, foraging or commuting across the site. No evidence of Badger setts was recorded in the vicinity of the site and the species is considered likely absent from the site.

Hedgehog

5.2.19 HERC returned three records of Hedgehog within 2km of the site since 2000. No evidence of presence was recorded during the survey. The site has potential to support foraging Hedgehogs or individuals commuting along hedgerows.

Invertebrates

The site lacks features likely to be of elevated value to notable invertebrates or likely to support notable assemblages.

6.0 Impact Assessment Criteria

6.1 The assessment of the impacts and effects⁶ on important ecological features within the Zone of Influence (ZoI) of the Scheme has been based on the Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines (2018). This process includes:

- Identification of ecological features likely to be affected;
- Identification of which ecological features are 'important' and, therefore, should be subject to detailed assessment;
- Characterising whether the effect on these ecological features is 'significant' in terms of the extent, magnitude, duration, reversibility, frequency/timing and whether it is likely to have a positive or negative effect.

6.2 Identifying the Zone of Influence (ZoI)

6.2.1 The 'Zone of Influence' for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This may be confined to within the site boundaries and land immediately adjacent, but for some ecological features may extend beyond the project site.

6.3 Evaluation

Determining Importance of Ecological Features and Resources

6.3.1 The CIEEM Guidelines acknowledge that determining importance of ecological features and resources is a complex and subjective process, but it provides key factors to take into consideration. These include geographic context; legal protection or control; site designations and features; habitat type and priority; biodiversity value; species of conservation value (including population size, distribution and abundance); ecosystem value/natural capital.

6.3.2 Focusing on assessments of biodiversity value, there are various characteristics that can be used to identify ecological resources or features that are likely to be important in terms of biodiversity. These include:

- Rare or uncommon species in the local, national or international context;
- Endemic or locally distinct sub-populations of a species;
- Species on the edge of their distribution;
- Notably large populations of animals or concentration of animals considered uncommon or threatened in a wider context;
- Species-rich assemblages of plants or animals;
- Ecosystems and their component parts which provide the habitats required by the above species, populations and/or assemblages;
- Plant communities (and associated animals) considered typical of valued natural/semi-natural vegetation types;

⁶ Note: The following definitions are used for the terms 'impact' and 'effect':

Impact – Actions resulting in changes to an ecological feature. For example, the construction activities of a development removing a hedgerow.

Effect – Outcome to an ecological feature from an impact. For example, the effects on a dormouse population from loss of a hedgerow (CIEEM 2018).

- Habitat diversity, connectivity and/or synergistic associations.

6.3.3 This assessment also measures the contribution to nature conservation interest from non-statutory sites, and the presence of habitats and species which, although not specially protected, are still considered to be of local, regional or national conservation importance.

6.3.4 This latter category includes identification of flora and fauna that are listed as Species of Principal Importance under the NERC Act 2006, those prioritised under the UK Biodiversity Action Plan (UK BAP)/Local Biodiversity Action Plans (LBAP), as well as Red Data Book Species.

6.3.5 Considering Geographic Context

The following frame of reference is used when considering the importance of an ecological feature:

- International (European);
- National;
- Regional;
- Metropolitan, County, vice-county or other local authority-wide area;
- District;
- Local (e.g. Parish or Neighbourhood)
- Site (not of importance beyond the immediate context of the site)

6.3.6 Features of 'local' importance are those considered to be below a district level of importance, but are considered to appreciably enrich the nature conservation resource or are of elevated importance beyond the context of the site.

6.3.7 Where features are identified as 'important' based on the list of key habitats and species set out above, but are very limited in extent or quality (in terms of habitat resource or species population) and do not appreciably contribute to the biodiversity interest beyond the context of the site, they are considered to be of 'site' importance.

Prediction of Ecological Impacts and Effects

6.3.8 This assessment has considered potential impacts on each ecological feature determined as 'important' from all phases of the project. Impacts are characterised, through consideration of their magnitude and/or extent, the route through which they occur (whether direct, indirect, secondary or cumulative) and their duration and their reversibility. Positive impacts are assessed as well as negative ones.

Significance of Effects

6.3.9 The CIEEM guidelines (2018) explain 'significant effect' with the following definition:

"For the purpose of EcIA, 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local."

6.3.10 A significant effect is an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project.

The following characteristics are considered when describing ecological impacts and effects:

- positive or negative

- extent
- magnitude
- duration
- frequency and timing
- reversibility

6.3.11 Following the characterisation of impacts and effects, an assessment of the ecological significance of an effect is made. The Guidelines promote a transparent approach in which a beneficial or adverse effect is determined to be significant or not, in ecological terms, in relation to: the conservation objectives of the defined site, the structure and functions of the ecosystem(s) and/or the conservation status⁷ of habitats or species within a given geographical area. The Guidelines also advise that it is important to consider the likelihood of a predicted impact.

6.3.12 The Guidelines also state that:

"After assessing the impacts of the proposal, all attempts should be made to avoid and mitigate ecological impacts. Once measures to avoid and mitigate ecological impacts have been finalised, assessment of the residual impacts should be undertaken to determine the significance of their effects on ecological features. Any residual impacts that will result in effects that are significant, and the proposed compensatory measures, will be the factors considered against ecological objectives (legislation and policy) in determining the outcome of the application."

6.3.13 For the purposes of this report, a detailed impact assessment has only been presented for residual effects present after mitigation, although the above assessment has been undertaken for each important ecological feature pre-mitigation, to inform the recommendations outlined in Section Eight.

Key Principles Underpinning Recommendations

6.3.14 The following hierarchy of principles underpin EcIA and are followed in the assessment undertaken in this report:

- Avoidance - Seek options that avoid harm to ecological features (for example, by locating on an alternative site). This is the preferred option.
- Mitigation - Negative effects should be avoided or minimised through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation.
- Compensation - Where there are significant residual negative ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.
- Enhancement - Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.

Potential Effects

6.3.15 Based on the results outlined in Section Five, Table 2 provides a summary of the important species and habitats that are known to be present and/or have potential to be significantly affected by the proposed construction without mitigation.

⁷ Habitats: conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area

Species: conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.

Table 2: Potential Receptors

Potential Receptor
Hedgerows
Nesting Birds
Bats
Hedgehog
Reptiles and Amphibians

7.0 Impact Assessment, Conclusions and Recommendations

7.1 General Description and Best Practice Recommendations

7.1.1 The site comprises species-poor grassland, together with a small area of mixed scrub, scattered trees, boundary hedgerows and a tree line.

Recommendations

7.1.2 Any works close to retained trees and hedgerows, including offsite hedgerow H2, should be undertaken in accordance with the British Standard BS5837: 2012.

7.1.3 During the construction phase, appropriate measures should be put in place to prevent any pollution incidents occurring. Appropriate guidance should be followed, such as the Environment Agency's Pollution Prevention Guidelines (2013) (now withdrawn but still considered to provide appropriate guidance).

7.2 Designated Sites

7.2.1 The ecological designations identified in the desktop study are well removed from the site and there is no potential for effects to arise from the proposed development. Therefore, no recommendations are made in respect of designated sites.

7.3 Habitats

7.3.1 The hedgerows are considered to represent priority habitat, albeit they are not in themselves considered to be of elevated ecological value. A short length of a predominantly non-native line of trees will be lost to the proposed site access. Semi-mature trees offer opportunities for faunal species including nesting birds. The existing grassland is of low botanical value and of low value for fauna.

Recommendations

7.3.2 Retained habitats will be protected during construction in line with good practice guidelines including, where appropriate, BS5837: 2012. The proposed creation of a length of species-rich hedgerow within the site will offset the minor loss to the tree line and produce a gain in hedgerow biodiversity units (calculated using the Defra Metric) of almost 20%. The creation of an area of other calcareous grassland is proposed for the public open space, together with an area of traditional orchard in the south of the site. The proposals would provide a gain for habitat biodiversity units of over 60%.

7.3.3 Following mitigation and compensation, the residual impact is assessed as minor positive at the site level in respect of hedgerow features. Grassland enhancement would be positive at the local level.

7.4 Nesting Birds

7.4.1 The trees and hedgerows within the site provide potential habitat for nesting birds. If birds' nests are disturbed during the process of incubation and rearing, then mortality of chicks could occur. Any clearance work will result in a loss of potential nesting habitat.

Recommendations

7.4.2 Any works involving vegetation clearance should avoid the bird breeding season (late February to August inclusive) to avoid harm to nesting species and to avoid a possible offence under the Wildlife and Countryside Act 1981 (as amended). If this is not practicable, then an experienced ecologist should undertake a nesting bird check survey, to locate any active bird nests within the site, so they can be avoided. Results of nesting bird surveys are only valid for 48hrs and, therefore, multiple surveys may be required for phased works.

7.4.3 It is also recommended that a minimum of seven nest boxes are provided as an enhancement, integrated within new buildings and on retained trees. These could include nest boxes for hole nesting species such as sparrows and tits. Provision of at least two integrated nest boxes for Swift is recommended, provided suitable locations are available on northern elevations.

7.4.4 Following mitigation and compensation measures, the residual impact is assessed as minor positive at the site level.

7.5 Bats

7.5.1 Bats are likely to use the hedgerows and tree line for commuting and foraging. The Ash trees in the north of the site have minor potential to support roosting bats. Use of on-site lighting during and post-construction has the potential to impact on the suitability of these habitats to support bats.

Recommendations

7.5.2 The design of a lighting scheme should follow guidance set out within Guidance Note 08/23 Bats and Artificial Lighting (Institute of Lighting Professionals and Bat Conservation Trust, 2023). Permanent lighting levels should be kept to a minimum on the retained hedgerows and trees, so as to minimise any increase in lighting levels on these features. Generally, any potential new lighting impacts associated with the proposed development (both during and post-construction phase) should be minimised by the use of warm white light sources and directional downlights - illuminating below the horizontal plane which avoids light trespass into the environment. The use of light directional accessories such as baffles, hoods and louvres can assist with this.

7.5.3 Lighting types to be avoided include any blue-white light sources, metal halide and mercury lamps, and any form of up-lighting, which lights above the horizontal plane, illuminating trees, buildings and foraging habitat.

7.5.4 It is also recommended that enhancements for bats are provided in the form of provision of bat roost features, such as bat boxes, within some of the new buildings and/or on retained trees. Provision of seven bat roost features is recommended. Suitable types would include the Schwegler 1FF or 2FF bat boxes, Schwegler bat access panel or Habibat bat roosts. There have been recent difficulties with supply of some bat boxes, so it is not considered appropriate to specify a particular model at this stage.

7.6 Hedgehog

7.6.1 No evidence of Hedgehog presence was found within the site. However, the species is known to be present in the wider area and could potentially utilise the site. If present during construction works there would be a risk of animals becoming trapped or being injured.

Recommendations

7.6.2 Any trenches or pits created during construction that are left open overnight should be ramped to provide an escape route for any animal that might fall in. Alternatively, a scaffold board or similar should be put in place so that animals may safely exit the excavation. As a further precaution, such excavations should be inspected each morning to ensure no animals have become trapped overnight.

7.6.3 Where close board fencing is installed to boundaries of residential gardens, gaps in the fencing should be provided to allow hedgehogs to move freely between gardens and the wider site.

7.6.4 With the implementation of these measures no impact on this species is anticipated.

7.7 Reptiles and Amphibians

7.7.1 There is minor potential for reptiles and amphibians to occur within the site.

Recommendations

7.7.2 A watching brief should be maintained for this species group. In the unlikely event any animals are found, these should be carefully removed to a safe offsite habitat. Depending upon when site works are planned to commence, the site should be close-mown over the winter period while reptiles are hibernating, and a short sward maintained thereafter until construction commences.

Conclusion

7.7.3 The site is overall of low ecological value, supporting very species-poor grassland. Boundary hedgerows and tree lines will very largely be retained and a range of mitigation and enhancement measures for faunal species will be implemented. Measures are proposed for habitat creation to exceed the mandatory level of biodiversity gain, including the creation of other calcareous grassland.

7.7.4 If the measures identified within this report are followed, no significant adverse ecological impact is likely to arise from the proposed development and overall there will be an enhancement to local ecological networks.

8.0 References

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9.0 Photographs



Site viewed from the south



Hedgerow H1 from the south



Nettle-dominated ground flora associated with hedgerow H1



Example of grassland quadrat location (for estimating species diversity)



Minor infestation of Creeping Thistle



Single specimen of Black Knapweed recorded on site



Formerly mown grassland within northern extension of site, showing Ash tree T10



Cowslips close to northern boundary



Offsite hedgerow H2 from north



Scrub viewed from Lucas Lane (from 2022)



Lawson Cypress in north of site (from 2022)



Tree line to south of site, looking east along Ashwell Street

10.0 Appendix 1: Plans

Plan 1: Site Location

Plan 2: Habitats and Ecological Features

Plan 1: Site Location



KEY



Site Boundary

**LAND AT ASHWELL STREET
ASHWELL, HERTS**

LOCATION PLAN

May 2024



Photograph copyright Google Earth

Plan 2: Habitats and Ecological Features

